

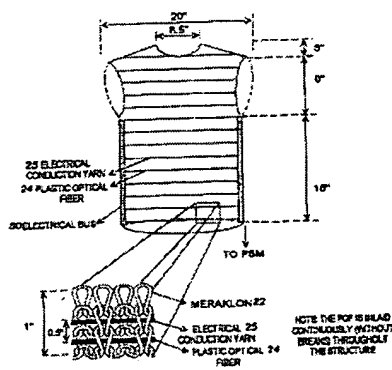
Remarks

Applicants would like to thank the Examiner for entering applicants' arguments contained in the December 6, 2006 response. Applicants would also like to thank the Examiner for taking the time to elaborate on the reasons for maintaining the rejections.

Applicants have amended independent Claim 1 and dependent Claim 7 to address the Examiner's concerns. In addition, dependent Claim 5 has been amended to correct a minor typographical error. Claims 1-40 are pending, with Claims 8-10, 13-24, 26-29 and 31-40 withdrawn because a previous Restriction Requirement by the Office. As such, Claims 1-7, 11, 12, 25 and 30 remain the case none of the claims being allowed.

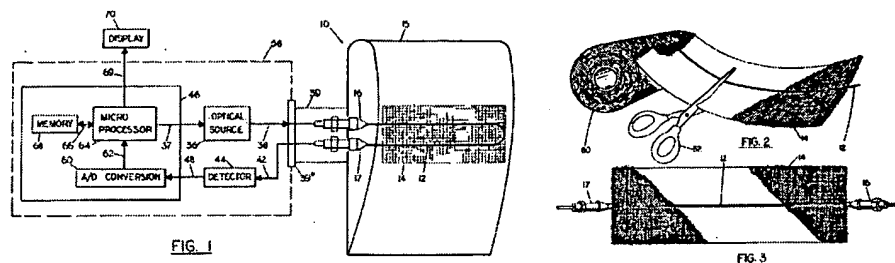
The Examiner stated that Jayaraman discloses a single layer fabric that would not meet the three-dimensional limitation. The Examiner then stated that Jayaraman discloses a process to produce three-dimensional structures in a single step with the finished structure having three dimensions, and stated that Applicants claims would read on any material with a finished three-dimensional structure. Applicant respectfully requests reconsideration and allowance in view of the following remarks.

As amended, the claimed fiber preform is *engineered from a 3-D fabric*. Jayaraman's Figure 17 is provided below:



While Jayaraman's shirt may be a three-dimensional structure, it is clearly engineered from a 2-D fabric. Jayarman's shirt is not a structure engineered from a 3-D fabric, as recited by the currently amended claims

Wheeler's Figures 1, 2, and 3 are also shown below.



Wheeler's wing 15, similar to Jayaraman's shirt, is a three-dimensional structure. However, Wheeler's wing is engineered from the 2-D fabric shown in Figures 2 and 3. Wheeler's wing is not engineered from a 3-D fabric as recited by the currently amended claims.

Applicants are making no claim to structures engineered from 2-D fabrics. Structures engineered from 2-D fabrics are unable to achieve the advantages of the present invention as discussed in applicants' specification. For example, applicants' specification provides (page 3, lines 1-11):

The plurality of controllably isolated or joined fiber or tow layers formed in 3-D fabrics provide particularly valuable opportunities, well beyond that of 2-D fabrics, for the development of elaborate functional systems, circuits, or networks as is so often done with multi-layer integrated circuits or multi-layer hydraulic manifolds. The very regular, inherently periodic nature of 3-D orthogonally woven and other 3-D fabrics, which are mentioned here as examples, allows them to perform functions similar to those of 3-D grids, arrays or networks. Examples of such functions include phased array emission/detection, shielding or refraction or diffraction of a known wavelength, damage and delamination detection, resin flow and cure rate control, acoustic emission signal sensing, active control of shapes, vibration suppression, supply or transmission of fluids to mention a few.

Further, Claim 7 is currently amended to recite that the 3-D fabric of Claim 1 is a woven fabric having a Z-yarn. Support for this amendment comes from, inter alia, page 26, line 16 to page 27, line 12 and Figures 8 and 9 described therein. Applicants believe these limitations further distinguish the claimed invention from the cited references.

Conclusion

Thus, it is submitted that by this amendment, the case in condition for allowance and such action is respectfully requested. However, if any issue remains unresolved, a telephone call to expedite allowance and issue is respectfully requested.

Respectfully submitted,



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Date: January 8, 2007
File No.: 7100-038

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